

What is claimed is:

1. A printing method comprising:

ejecting ink from ink ejecting sections provided in/on a  
5 movable print head to form dots;

performing at least either

printing with a first arrangement using inks arranged  
according to said first arrangement or

printing with a second arrangement using inks  
10 arranged according to said second arrangement

by changing the arrangement of inks supplied to each of said  
ink ejecting sections; and

printing, with one forward and return movement of said print  
head, a correction pattern for determining

15 a correction amount to be used for said printing with  
the first arrangement for correcting a misalignment  
between a position at which dots are formed during  
a forward pass of said print head and a position at  
which dots are formed during a return pass of said  
20 print head that occurs during said printing with the  
first arrangement and

a correction amount to be used for said printing with  
the second arrangement for correcting a misalignment  
between a position at which dots are formed during  
25 a forward pass of said print head and a position at  
which dots are formed during a return pass of said  
print head that occurs during said printing with the  
second arrangement.

30 2. A printing method according to claim 1, wherein:

inks of a first number of colors are used during said printing with the first arrangement;

inks of a second number of colors are used during said printing with the second arrangement;

5       at least either printing with the first number of colors using said inks of the first number of colors or printing with the second number of colors using said inks of the second number of colors is performed by changing the number of colors of inks supplied on a color-by-color basis to each of said ink ejecting  
10 sections; and

        a correction pattern for determining

        a correction amount to be used for said printing with the first number of colors for correcting a misalignment between a position at which dots are  
15       formed during a forward pass of said print head and a position at which dots are formed during a return pass of said print head that occurs during said printing with the first number of colors and

        a correction amount to be used for said printing with the second number of colors for correcting a misalignment between a position at which dots are  
20       formed during a forward pass of said print head and a position at which dots are formed during a return pass of said print head that occurs during said printing with the second number of colors  
25

        is printed with one forward and return movement of said print head.

3.     A printing method according to claim 2, wherein:  
30       said correction pattern is printed by forming

a first sub-pattern during said forward pass of said print head and

a second sub-pattern and a third sub-pattern during said return pass of said print head

5 by ejecting ink from different ones of said ink ejecting sections;

a sub-pattern pair consisting of

said first sub-pattern and

one of either said second sub-pattern or said third

10 sub-pattern

is taken as the correction pattern for determining said correction amount to be used for said printing with the first number of colors; and

a sub-pattern pair consisting of

15 said first sub-pattern and

the other one of said second sub-pattern or said third sub-pattern

is taken as the correction pattern for determining said correction amount to be used for said printing with the second  
20 number of colors.

4. A printing method according to claim 3, wherein:

each of said ink ejecting sections has ink ejecting points that are arranged in a row in a direction perpendicular to the  
25 direction of movement of said print head;

said first sub-pattern is formed during said forward pass by ejecting ink from ones of said ink ejecting points that are arranged in a central region of the one of said ink ejecting sections used for forming said first sub-pattern;

30 said second sub-pattern is formed during said return pass

by ejecting ink from ones of said ink ejecting points that are arranged in a region on one end of the one of said ink ejecting sections used for forming said second sub-pattern; and

said third sub-pattern is formed during said return pass  
5 by ejecting ink from ones of said ink ejecting points that are arranged in a region on the other end of the one of said ink ejecting sections used for forming said third sub-pattern.

5. A printing method according to claim 2, wherein:

10 said printing with the first number of colors is performed by printing using at least light magenta ink and light cyan ink; and

said ink ejecting sections used for printing said correction pattern is

15 an ink ejecting section used for ejecting said light magenta ink during said printing with the first number of colors and

an ink ejecting section used for ejecting said light cyan ink during said printing with the first number  
20 of colors.

6. A printing method according to claim 2, wherein:

said printing with the second number of colors is performed using at least, among said ink ejecting sections,

25 two of said ink ejecting sections for ejecting magenta ink and

two of said ink ejecting sections for ejecting cyan ink; and

said ink ejecting sections used for printing said correction  
30 pattern are either

said two ink ejecting sections for ejecting said magenta ink or

said two ink ejecting sections for ejecting said cyan ink.

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7. A printing method comprising:

ejecting ink from ink ejecting sections provided in/on a movable print head to form dots;

performing at least either

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printing with a first number of colors using inks of said first number of colors or

printing with a second number of colors using inks of said second number of colors

by changing the number of colors of inks supplied on a

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color-by-color basis to each of said ink ejecting sections; and

printing, with one forward and return movement of said print

head, a correction pattern for determining

a correction amount to be used for said printing with the first number of colors for correcting a misalignment between a position at which dots are formed during a forward pass of said print head and a position at which dots are formed during a return pass of said print head that occurs during said printing with the first number of colors and

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a correction amount to be used for said printing with the second number of colors for correcting a misalignment between a position at which dots are formed during a forward pass of said print head and a position at which dots are formed during a return pass of said print head that occurs during said

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printing with the second number of colors,  
wherein:

each of said ink ejecting sections has ink ejecting points  
that are arranged in a row in a direction perpendicular to the  
5 direction of movement of said print head;

said correction pattern is made of

a first sub-pattern formed during said forward pass  
of said print head by ejecting ink from ones of said  
ink ejecting points that are arranged in a central  
10 region of the one of said ink ejecting sections used  
for forming said first sub-pattern,

a second sub-pattern formed during said return pass  
of said print head by ejecting ink from ones of said  
ink ejecting points that are arranged in a region on  
15 one end of the one of said ink ejecting sections used  
for forming said second sub-pattern, and

a third sub-pattern formed during said return pass  
of said print head by ejecting ink from ones of said  
ink ejecting points that are arranged in a region on  
20 the other end of the one of said ink ejecting sections  
used for forming said third sub-pattern

by using different ones of said ink ejecting sections;

the correction pattern for determining said correction  
amount to be used for said printing with the first number of colors  
25 is a sub-pattern pair consisting of

said first sub-pattern and  
one of either said second sub-pattern or said third  
sub-pattern;

the correction pattern for determining said correction  
30 amount to be used for said printing with the second number of colors

is a sub-pattern pair consisting of

said first sub-pattern and

the other one of said second sub-pattern or said third sub-pattern;

5        said printing with the first number of colors is performed by printing using at least light magenta ink and light cyan ink;

said ink ejecting sections used for printing said correction pattern is

10        an ink ejecting section used for ejecting said light magenta ink during said printing with the first number of colors and

an ink ejecting section used for ejecting said light cyan ink during said printing with the first number of colors;

15        said printing with the second number of colors is performed using at least, among said ink ejecting sections,

two of said ink ejecting sections for ejecting magenta ink and

20        two of said ink ejecting sections for ejecting cyan ink; and

said ink ejecting sections used for printing said correction pattern are either

said two ink ejecting sections for ejecting said magenta ink or

25        said two ink ejecting sections for ejecting said cyan ink.

8.     A printing apparatus comprising:

30        a movable print head having ink ejecting sections for ejecting ink to form dots, wherein said printing apparatus:

is capable of performing at least either

printing with a first arrangement using inks arranged  
according to said first arrangement or

printing with a second arrangement using inks

5 arranged according to said second arrangement

by changing the arrangement of inks supplied to each of said  
ink ejecting sections; and

prints, with one forward and return movement of said print  
head, a correction pattern for determining

10 a correction amount to be used for said printing with  
the first arrangement for correcting a misalignment  
between a position at which dots are formed during  
a forward pass of said print head and a position at  
which dots are formed during a return pass of said  
15 print head that occurs during said printing with the  
first arrangement and

a correction amount to be used for said printing with  
the second arrangement for correcting a misalignment  
between a position at which dots are formed during  
20 a forward pass of said print head and a position at  
which dots are formed during a return pass of said  
print head that occurs during said printing with the  
second arrangement.

25 9. A computer-readable storage medium having a program  
recorded thereon, said program making a printing apparatus

that has a movable print head having ink ejecting  
sections for ejecting ink to form dots and

that is capable of performing at least either printing

30 with a first arrangement using inks arranged



according to said first arrangement or printing with  
a second arrangement using inks arranged according  
to said second arrangement by changing the  
arrangement of inks supplied to each of said ink  
ejecting sections, and printing a correction pattern  
for determining a correction amount to be used for  
said printing with the first arrangement for  
correcting a misalignment between a position at which  
dots are formed during a forward pass of said print  
head and a position at which dots are formed during  
a return pass of said print head that occurs during  
said printing with the first arrangement and a  
correction amount to be used for said printing with  
the second arrangement for correcting a misalignment  
between a position at which dots are formed during  
a forward pass of said print head and a position at  
which dots are formed during a return pass of said  
print head that occurs during said printing with the  
second arrangement

function to print said correction pattern with one forward  
and return movement of said print head.

10. A correction pattern for use with a printing apparatus,  
said printing apparatus being capable of performing  
at least either printing with a first arrangement  
using inks arranged according to said first  
arrangement or printing with a second arrangement  
using inks arranged according to said second  
arrangement by changing the arrangement of inks  
supplied to each of a plurality of ink ejecting

sections provided in/on a movable print head and for ejecting ink to form dots, each of said ink ejecting sections having ink ejecting points that are arranged in a row in a direction perpendicular to the direction of movement of said print head,

said correction pattern being used for determining

a correction amount to be used for said printing with the first arrangement for correcting a misalignment between a position at which dots are formed during a forward pass of said print head and a position at which dots are formed during a return pass of said print head that occurs during said printing with the first arrangement and

a correction amount to be used for said printing with the second arrangement for correcting a misalignment between a position at which dots are formed during a forward pass of said print head and a position at which dots are formed during a return pass of said print head that occurs during said printing with the second arrangement,

said correction pattern comprising:

a first sub-pattern formed during said forward pass of said print head and

a second sub-pattern and a third sub-pattern formed during said return pass of said print head,

wherein:

said correction amount to be used for said printing with the first arrangement is determined based on a sub-pattern pair consisting of

said first sub-pattern and

one of either said second sub-pattern or said third sub-pattern; and

said correction amount to be used for said printing with the second arrangement is determined based on a sub-pattern pair  
5 consisting of

said first sub-pattern and  
the other one of said second sub-pattern or said third sub-pattern.